122053

## Calc in PA

for complexometry

## $C_{30}H_{26}N_2O_{13}$

M = 622,54

CAS [1461-15-0]

EINECS 215-957-1

NC 3204 16 00

SYNONYMS: Fluorexone • bis-[N,N-bis-(Carboximethyl)Aminomethyl] Fluorescein • Fluorescein Complexone •

PHYSICAL DATA: Orange powder • Solubility in water 4 g/l. In alcohol 0,6 g/l • M. P.: 300 °C dec. •

APPLICATIONS: Reagent for Ca: R. L. Olsen et al., Talanta, 7, 187 (1961); H. Gibitz, Arztl. Lab., 9, 389 (1963) • Indicator for the complexometric determination of Ca and Mg : B. M. Tucker , Analyst , 82 , 284 (1957) ; R. Pribil , Ibid. , 83 , 188 (1958) ; T. Y. Toribara , L. Koval , Talanta , 7 , 248 (1961) • Determination of Ca in biological systems: J. F. Dandrowki, C. L. Benson, Clin. Chem., 18, 1411 (1972); V. C. K. Chiu, D. H. Haynes, J. Byophys, 18, 3

BIBLÍOGRAPHY: Beilstein 19, III/IV, 4338 • Conn's IX, 341 • K. L Cheng et al., "Handbook of Organic Analytical Reagents", 225-230, CRC, Boca Raton (Florida) (1982) •

## SPECIFICATIONS:

Identity IR p/t.  $\lambda$  of max. ABS. in NaOH 0,002 mol/l 492-500 nm

A 1%, 1cm, λmax >650 T.L.C p/t.

## MAXIMUM LIMIT OF IMPURITIES

Insoluble matter in NaOH p/t. Loss on drying at 135°C 15 % Suitability as complexometric indicator. p/t.

	Hits	Search Text	DBs
			USPAT;
		406 (4)	US-PGPU
1	65	426/\$.ccls. and (chromophore or fluorophore)	B; EPO;
			JPO; DERWENT
2	7	426/\$.ccls. and (chromophore or fluorophore)	USOCR
-	ļ	12/4/10013: and (chilohophole of flatorophole)	USPAT;
		(sensing or sensor or senses or indicia or	US-PGPU
3	178	inidicating or indicate) same ( (chromophore or	B; EPO;
		fluorophore) and gas)	JPO;
	ļ		DERWENT
		(sensing or sensor or senses or indicia or	USPAT; US-PGPU
4	464	<pre>inidicating or indicate or detection or detecting or detect)same ((chromophore or fluorophore) and</pre>	B; EPO;
		gas)	JPO;
		940/	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
5	126	inidicating or indicate or detection or detecting	US-PGPU
ם	126	or detect) same ((chromophore or fluorophore) and	B; EPO; JPO;
		gas)) and (food or vegetable or meat )	DERWENT
	·····	(((sensing or sensor or senses or indicia or	USPAT;
	l	inidicating or indicate or detection or detecting	US-PGPU
б	21	or detect) same ((chromophore or fluorophore) and	B; EPO;
		gas)) and (food or vegetable or meat )) and palladium	JPO;
$\vdash\vdash$		• 1	DERWENT;
		((sensing or sensor or senses or indicia or	US-PGPU
7	78	inidicating or indicate or detection or detecting or detect)same ((chromophore or fluorophore) and	B; EPO;
		gas)) and palladium	JPO;
		3, E	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
8	19	inidicating or indicate or detection or detecting	US-PGPU
o	119	or detect)same ((chromophore or fluorophore) and gas)) and (food or vegetable or meat) same	B; EPO; JPO;
		(packag\$3 or film or bag or container)	DERWENT
			USPAT;
	١.	(sensing or sensor or senses or indicia or	US-PGPU
9	6	inidicating or indicate) same (spoiled or spoilage)	
		and (chromophore or fluorophore)	JPO; DERWENT
<del></del>			USPAT;
		((sensing or sensor or senses or indicia or indicating or indicate)same (spoiled or spoilage	US-PGPU
10	188	or contamination or contaminents)) and	B; EPO;
		(chromophore or fluorophore)	JPO;
			DERWENT
		(((sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate)same (spoiled or spoilage or contamination or contaminents)) and	US-PGPU
11	13	(chromophore or fluorophore)) and (food or	B; EPO; JPO;
İ		vegetable or meat ) same (packag\$3 or film or bag	DERWENT
$\vdash$		or container)	
		(sensing or sensor or senses or indicia or	USPAT; US-PGPU
12	13	inidicating or indicate) same (spoiled or spoilage)	B; EPO:
-	]	and (426/231 or 426/232)	JPO;
	l		DERWENT
	[		USPAT;
	ا	((sensing or sensor or senses or indicia or	US-PGPU
13	0	inidicating or indicate)same (spoiled or spoilage) and (426/231 or 426/232)) and palladium	
		and (120/201 of 320/202); and partactum	JPO; DERWENT
	l	("2485566"   "2626855"   "3067015"   "4003709"	
14	8	"4285697"   "4308028"   "5306466"   "5439648").PN.	USPAT
	I		USPAT;
	17.6	/40 C /0 20 \ GGT 0	US-PGPU
15	176	(426/232).CCLS.	B; EPO;
			JPO; DERWENT
$\vdash$	<b></b>		USPAT;
			US-PGPU
16	633	(426/231).CCLS.	B; EPO;
			JPO;
		·	DERWENT

	Hits	Search Text	DBs
			USPAT;
	407	(42.6./0.7)	US-PGPU
17	407	(426/87).CCLS.	B; EPO; JPO;
			DERWENT
			USPAT;
			US-PGPU
18	449	(426/112).CCLS.	B; EPO;
			JPO; DERWENT
<u> </u>	ļ		USPAT;
			US-PGPU
19	1	73/866.3 and palladium	в; еро;
			JPO;
			DERWENT
			USPAT; US-PGPU
20	237	(422/82.07).CCLS.	B; EPO;
			JPO;
			DERWENT
			USPAT;
21	597	(422/82.08).CCLS.	US-PGPU B; EPO;
	"	(122) 02.00)	JPO;
			DERWENT
		(((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and	USPAT;
22	ار	(chromophore or fluorophore) and (food or	US-PGPU
22	3	vegetable or meat ) same (packag\$3 or film or bag	B; EPO; JPO;
		or container)	DERWENT
			USPAT;
	_	(fluorexon or flourescein) and (food or vegetable	US-PGPU
23	5	or meat ) same (packag\$3 or film or bag or container)	B; EPO;
		concainer)	JPO; DERWENT
			USPAT;
		(fluorexon or fluorescein) and (food or vegetable	
24	314	or meat ) same (packag\$3 or film or bag or	B; EPO;
		container)	JPO;
			DERWENT USPAT:
			US-PGPU
25	32	calcein same (chromophore or fluorophore)	B; EPO;
			JPO;
			DERWENT
26	1	"1960552"	EPO; DERWENT
		H10005500H	EPO;
27	1	"19605522"	DERWENT
28	2	"0449798"	EPO;
	-		DERWENT
29	3	"4332512"	EPO;
			DERWENT USPAT;
		((sensing or sensor or senses or indicia or inidicating or indicate or detection or detecting	US-PGPU
30	308	or detect) same spoil\$3) and (food or vegetable or	B; EPO;
		meat ) same (packag\$3 or film or bag or container)	JPO;
<u> </u>			DERWENT
		(((sensing or sensor or senses or indicia or inidicating or indicate or detection or detecting	USPAT;
31	6	or detect) same spoil\$3) and (food or vegetable or	
		meat ) same (packag\$3 or film or bag or	JPO;
<u> </u>		container)) and palladium	DERWENT
		////26/222) CCIC ) or (//26/221) CCIC )	USPAT;
32	49	(((426/232).CCLS.) or ((426/231).CCLS.) or ((426/87).CCLS.) or ((422/82.07).CCLS.) or	US-PGPU
	]	((422/82.08).CCLS.)) and palladium	B; EPO; JPO;
		•	DERWENT
	<u> </u>		USPAT;
	],	(((426/232).CCLS.) or ((426/231).CCLS.) or	US-PGPU
33	1	((426/87).CCLS.) or ((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and fluorexon	B; EPO;
		(\122/02.00/.CCBS.// and IIuoIexon	JPO; DERWENT
	L	<del>.</del>	(11 114 1

	Hits	Search Text	DBs
34	1	(((426/232).CCLS.) or ((426/231).CCLS.) or ((426/87).CCLS.) or ((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and (calcein with blue)	USPAT; US-PGPU B; EPO; JPO;
35	1	(((426/232).CCLS.) or ((426/231).CCLS.) or ((426/87).CCLS.) or ((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and (calcein same blue)	DERWENT; USPAT; US-PGPU B; EPO; JPO;
36	4	(food or vegetable or meat ) same (packag\$3 or film or bag or container) and (calcein same blue)	DERWENT; USPAT; US-PGPU B; EPO; JPO; DERWENT
37	11	(food or vegetable or meat ) same (packag\$3 or film or bag or container) and (calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
38	0	palladium same (calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
39	124	palladium and (calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
40	320	(fluorexon or fluorescein or calcein) and (food or vegetable or meat ) same (packag\$3 or film or bag or container)	USPAT; US-PGPU B; EPO; JPO; DERWENT
41	3	fluorexon and ((fluorexon or fluorescein or calcein) and (food or vegetable or meat ) same (packag\$3 or film or bag or container))	USPAT; US-PGPU B; EPO; JPO; DERWENT
42	22	((fluorexon or fluorescein or calcein) and (food or vegetable or meat ) same (packag\$3 or film or bag or container)) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
43	1	(fluorexon and palladium)	USPAT; US-PGPU B; EPO; JPO; DERWENT
44	62	(calcein and palladium) and (food or vegetable or meat )	USPAT; US-PGPU B; EPO; JPO; DERWENT
45	0	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and calcein and palladium	JPO; DERWENT
46	3	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and calcein	USPAT; US-PGPU B; EPO; JPO; DERWENT
47	2	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and calcein and metal	USPAT; US-PGPU B; EPO; JPO; DERWENT

	Hits	Search Text	DBs
48	33	("2485556"   "3067015"   "3520124"   "4003709"   "4066403"   "4098577"   "4105800"   "4154107"   "4195056"   "4195058"   "4212153"   "4285697"   "4292916"   "4938389"   "5045283"   "5053339"   "5058088"   "5085802"   "5096813"   "5156780"   "5180598"   "5182212"   "5254473"   "5306466"   "5407829"   "5439648"   "5443987"   "5653941"   "5663072"   "5753285"   "5876753"   "5981614"   "6057162").PN.	USPAT
49	0	(Fluorescein adj complexon) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
50	2	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein adj complexon) and metal	USPAT; US-PGPU B; EPO; JPO; DERWENT
51	2	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein adj complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
52	2	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein with complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
53	3	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein and calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
54	895	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3) and((Fluorescein adj complexon)or calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
55	115	((sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)and((Fluorescein adj complexon)or calcein) ) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
56	3	sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)and(Fluorescein adj complexon	USPAT; US-PGPU B; EPO; JPO; DERWENT
57	2	fluorexon and (Fluorescein adj complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
58	3	calcein and(Fluorescein adj complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
59	0	calcein and(Fluorescein adj complexon) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
60	124	(calcein or (Fluorescein adj complexon)) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
61	537	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3) and ((Fluorescein adj complexon) or calcein) and metal	USPAT; US-PGPU B; EPO; JPO; DERWENT

	Hits	Search Text	DBs
		(sensing or sensor or senses or indicia or	USPAT;
62	226	inidicating or indicate or	US-PGPU
62	226	detect\$3)and((Fluorescein adj complexon)or calcein) and metal and (food or meat or	B; EPO; JPO;
		vegetables)	DERWENT
		("2485556"   "3067015"   "3520124"   "4003709"	
		"4066403"   "4098577"   "4105800"   "4154107"	
		"4195056"   "4195058"   "4212153"   "4285697"   "4292916"   "4938389"   "5045283"   "5053339"	
63	33	"5058088"   "5085802"   "5096813"   "5156780"	USPAT
		"5180598"   "5182212"   "5254473"   "5306466"	
		"5407829"   "5439648"   "5443987"   "5653941"	
		"5663072"   "5753285"   "5876753"   "5981614"	
		"6057162").PN.	USPAT;
		(sensing or sensor or senses or indicia or inidicating or indicate or	US-PGPU
64	142	detect\$3) and ((Fluorescein adj complexon) or	B; EPO;
		calcein) and pd	JPO;
			DERWENT
		((sensing or sensor or senses or indicia or inidicating or indicate or	USPAT; US-PGPU
65	53	detect\$3)and((Fluorescein adj complexon)or	B; EPO;
		calcein) and metal and (food or meat or	JPO;
		vegetables)) and pd	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate or	US-PGPU
66	173	detect\$3)and((Fluorescein adj complexon)or calcein) and metal and (food or meat or	B; EPO;
		vegetables)) not ((calcein or (Fluorescein adj	JPO;
		complexon)) and palladium)	DERWENT
		((calcein or (Fluorescein adj complexon)) and	USPAT;
	İ	palladium) not (((sensing or sensor or senses or	US-PGPU
67	80	indicia or inidicating or indicate or	B; EPO;
		detect\$3) and ((Fluorescein adj complexon) or calcein) and metal and (food or meat or	JPO;
		vegetables)) and pd)	DERWENT
		((sensing or sensor or senses or indicia or	
		inidicating or indicate or	USPAT;
		detect(3) and (\frac{1}{1} dotescern ad) complexon) of	US-PGPU
68	173	calcein) and metal and (food or meat or vegetables)) not (((sensing or sensor or senses or	
"	-	indicia or inidicating or indicate or	JPO;
		detect\$3) and ((Fluorescein adj complexon) or	DERWENT
		calcein) and metal and (food or meat or	
<u> </u>		vegetables)) and pd)	ucnam.
			USPAT; US-PGPU
69	3	"6428748"	B; EPO;
			JPO;
L			DERWENT
70	1	2002-627490.NRAN.	DERWENT
71	5	"2184677"	EPO; JPO;
' <sup>1</sup>	5	"2184677"	DERWENT
<del></del>	·····		EPO;
72	8	"273570"	JPO;
	<b></b>		DERWENT
1	_		EPO;
73	1	"5321147"	JPO; DERWENT
_	<b></b>		EPO;
74	2	"2735705"	JPO;
L	<u> </u>		DERWENT
75	1	"05321147"	JPO
			USPAT;
76	0	bis?carboxymethyl?aminomethyl with fluorescein	EPO;
	1		JPO; DERWENT
-	<b></b>		USPAT;
	<u> </u>		EPO;
77	0	carboxymethyl?aminomethyl with fluorescein	JPO;
			DERWENT

	Hits	Search Text	DBs
78	200	fluorescein and calcein	USPAT; EPO;
			JPO; DERWENT
79	2	fluorescein adj complexone	USPAT; EPO; JPO; DERWENT
80	4	(fluorescein adj complexone) or fluorexone	USPAT; EPO; JPO; DERWENT
81	2	((fluorescein adj complexone) or fluorexone) and (metal or palladium)	USPAT; EPO; JPO; DERWENT
82	88	calcein and palladium	USPAT; EPO; JPO; DERWENT
83	18028	calcein and palladium and 3-bromo-5H,6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]c arbazole-7(7H)	USPAT; EPO; JPO; DERWENT
84	3	oftasceine	USPAT; EPO; JPO; DERWENT